REMARKS

This paper is being provided in response to the September 12, 2003 Office Action for the above-referenced application. In this response, Applicants have amended Claims 1, 36, 37, 38, 43, 51, 59, 82-85, 103, 104, 132-137, 140-145, and 148-150 in order to clarify that which Applicants deem to be the claimed invention. Applicants respectfully submit that the modifications to the claims are all supported by the originally filed application.

Applicants thank Examiner To and Examiner Corrielus for the courtesies extended in the telephone interview on December 16, 2003 with Applicants' representatives, Ms. Saturnelli and Mr. Pasternack.

The rejection of Claims 1-50, 132-134 and 140-142 under 35 U.S.C. 103(a) as being unpatentable over Nanjo et al. (U.S. Patent No. 5,778,361, hereinafter referred to as "Nanjo") and in view of Middlebrook (U.S. Patent No. 5,930,809, hereinafter referred to as "Middlebrook") is hereby traversed and reconsideration thereof is respectfully requested. Applicants respectfully submit that Claims 1-50, 132-134 and 140-142, as amended herein, are patentable over the references, taken separately or in combination.

Claim 1, as amended herein, recites a method of fulfilling an information need based on documents and an index stored on a computer-readable medium comprising the steps of: receiving a query containing an unspecified portion; identifying one or more documents in the index that contain a match for at least a portion of the query; locating one or more strings which are matches for the unspecified portion in the query within the identified one or more documents;

and ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more documents. Claims 2-35 depend from Claim 1.

Claim 36, as amended herein, recites a method of fulfilling an information need based on documents and an index stored on a computer-readable medium comprising the steps of: receiving a query containing an unspecified portion; identifying one or more documents in the index that contain a match for at least a portion of the query; locating a plurality of strings which are matches for the unspecified portion in the query within the identified one or more documents; and ranking each of said plurality strings which are matches resulting from the query in accordance with a frequency of said each string within one or more documents.

Claim 37, as amended herein, recites a method of fulfilling an information need based on documents and an index stored on a computer-readable medium comprising the steps of: storing an index identifying documents containing terms; receiving a query containing an unspecified portion; identifying one or more documents in the index that contain a match for at least a portion of the query; locating one or more strings which are matches for the unspecified portion in the query within the identified one or more documents; and ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more documents.

Claim 38, as amended herein, recites a method of fulfilling an information need comprising the steps of: receiving a query containing an unspecified portion, the unspecified

portion including an unspecified term; identifying a string which is a match for the unspecified portion in the query within a body of information stored on a computer-readable medium; and ranking said string which is a match resulting from the query in accordance with a frequency of said each string within a body of information. Claims 39-42 depend from Claim 38.

Claim 43, as amended herein, recites a method of fulfilling an information need comprising the steps of: receiving a query containing an unspecified portion, the unspecified portion including an unspecified term; identifying a plurality of strings which are matches for the unspecified portion of the query within a body of information stored on a computer-readable medium; and ranking each of said plurality of strings which are matches resulting from the query in accordance with a frequency of said each string within a body of information. Claims 44-50 depend from Claim 43.

Claim 132, as amended herein, recites an apparatus for fulfilling an information need based on documents and an index stored on a computer-readable medium comprising: memory means that stores computer-executable process steps; and a processor that executes the process steps so as (i) to receive a query containing an unspecified portion, (ii) to identify one or more documents in the index that contain a match for at least a portion of the query, (iii) to locate one or more strings which are matches for the unspecified portion of the query within the identified one or more documents, and (iv) to rank each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more documents.

Claim 133, as amended herein, recites an apparatus for fulfilling an information need comprising: memory means that stores computer-executable process steps; and a processor that executes the process steps so as to (i) receive a query containing an unspecified portion, the unspecified portion including an unspecified term,(ii) identify a string which is a match for the unspecified portion of the query within a body of information stored on a computer-readable medium, and (iii) rank said string which is a match resulting from the query in accordance with a frequency of said string within a body of information.

Claim 134, as amended herein, recites an apparatus for fulfilling an information need comprising: memory means that stores computer-executable process steps; and a processor that executes the process steps so as to(i) receive a query containing an unspecified portion, the unspecified portion including an unspecified term, (ii) identify a plurality of strings which are matches for the unspecified portion of the query within a body of information stored on a computer-readable medium, and (iii)rank each of said plurality of strings which are matches resulting from the query in accordance with a frequency of said each string within a body of information.

Claim 140, as amended herein, recites Computer-executable process steps stored on a computer-readable medium, the computer-executable process steps to fulfill an information need based on documents and an index also stored on a computer-readable medium, the computer-executable process steps comprising: code to receive a query containing an unspecified portion; code to identify one or more documents in the index that contain a match for at least a portion of the query; code to locate one or more strings which are matches for the unspecified portion of the query within the identified one or more documents; and code to rank each of said one or more

strings which are matches resulting from the query in accordance with a frequency of said each string within one or more documents.

Claim 141, as amended herein, recites computer-executable process steps stored on a computer-readable medium, the computer-executable process steps to fulfill an information need, the computer-executable process steps comprising:code to receive a query containing an unspecified portion, the unspecified portion including an unspecified term; code to identify a string which is a match for the unspecified portion of the query within a body of information stored on a computer-readable medium; and code to rank said string which is a match resulting from the query in accordance with a frequency of said string within a body of information.

Claim 142, as amended herein, recites computer-executable process steps stored on a computer-readable medium, the computer-executable process steps to fulfill an information need, the computer-executable process steps comprising: code to receive a query containing an unspecified portion, the unspecified portion including an unspecified term; code to identify a plurality of strings which are matches for the unspecified portion of the query within a body of information stored on a computer-readable medium; and code to rank each of said plurality of strings which are matches resulting from the query in accordance with a frequency of said each string within a body of information.

Nanjo discloses a method and system for fast indexing and searching of text in compound word languages such as Japanese. (See Abstract). Nanjo discloses creating a content index by generating a reference to each object that contains an index term. (Col. 5, Line 38-42). Nanjo discloses performing step indexing so that each symbol or character is treated as the potential

beginning of a word. (Col. 5, Line 65-Col. 6, Line 21). Nanjo discloses using a wildcard character for pattern matching of an index term. (Col. 6, Lines 23-50). Nanjo includes a direct search system that directly searches an object, such as a document or file, based on the query and generates the search result or a portion of the search result. (Col. 7, Lines 24-28).

Middlebrook discloses a map box 34 provided along one of the vertical edges of the computer screen 30. Contained within the map box 34 is a base typographical map 36 of the entire body of text 32 from its beginning word to its last word. The reduced text in the map 36 is not intended to be read but is intended to enable a viewer to recognize the overall length of the retrieved body of text 32 as well as the layout and physical characteristics of the body of text 32 taken as a whole. (Col. 3, Lines 20-27; Figure 2). Included in Figure 2 of Middlebrook is a choice menu 54 with the letters G, T, L, and S. The G selection produces a GISTSCAPE mapping to give a user a general gist of the body of text 32 based upon a statistical analysis of words in the text. The S selection stands for SEARCHSCAPE which, when activated, provides the user with the opportunity to type in a search query which may contain any sequence of characters and may or may not contain wildcard characters. The L choice stands for LEXISCAPE and the T choice stands for TEXTSCAPE. (Col. 4, Line 42-Col. 5, Line 10). The lexiscape mapping is created by statistically analyzing the grammatical features of the body of text to find target terms that are essential to understanding the body of text. The primary factors used in created a lexiscape are the frequency and location of target terms. The primary factor of frequency refers to the number of times a target term appears in a body of text. (Col. 5, Lines 45-57). To analyze information contained within the body of text, statistical techniques are used to analyze all of the text features contained within the original body of text. Each text feature is analyzed on the basis of its frequency. In order to select the textual features to be mapped in a

lexiscape, a list of all possible nouns appearing in the text is compiled and the frequency of each possible noun is noted. The possible noun list is then ranked in descending order according on the basis of frequency. (Col. 6, Lines 18-41).

Applicants' amended Claim 1 is neither disclosed nor suggested by the references, taken separately or in combination, in that the references neither disclose nor suggest ***a method of fulfilling an information need based on documents and an index stored on a computer-readable medium comprising the steps of: receiving a query containing an unspecified portion; identifying one or more documents in the index that contain a match for at least a portion of the query; locating one or more strings which are matches for the unspecified portion in the query within the identified one or more documents; and ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more documents,*** as set forth in Applicants' amended Claim 1. Nanjo discloses using an index search to return documents which are then searched sequentially with a direct search to verify that the full search string is matched. The search results of Nanjo comprise a list of document file names and/or path names identifying the object satisfying the search criteria. Nanjo's search results is a list of objects, such as documents, not ***one or more strings which are matches resulting from the query***. Additionally, Nanjo appears silent on ***ranking the one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more documents,*** as set forth in Applicants' amended Claim 1. Middlebrook discloses a lexiscape menu option resulting in a lexical map of a list of all possible nouns appearing in the text in accordance with the frequency of each possible noun in the entire body of text. Middlebrook also discloses a separate menu option, the searchscape option, which, when activated by menu selection, lets the

user enter a search query. Middlebrook discloses providing a lexiscape option which ranks all possible nouns in a body of text, but does not disclose or suggest ***ranking the frequency of one or more strings which are matches resulting from a query.*** Accordingly, the references neither disclose nor suggest at least the feature of ***ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more documents,*** as set forth in Applicants' amended Claim 1.

Applicants respectfully submit that Middlebrook appears to teach away from Applicants' invention as set forth in amended Claim 1. Middlebrook teaches an arrangement that includes four separate menu options. The four menu options includes a lexiscape (L) option and a searchscape (S) option. Middlebrook appears to teach away from Applicants' claimed invention by separating the different functionalities associated with each menu option. No where does Middlebrook suggest using the features or functionality associated with the S menu option with the L option. Applicants respectfully submit that Middlebrook rather teaches away from Applicants' claimed invention as set forth in Claim 1 by segregating the L and S options and associated functionality into separate menu options.

Applicants respectfully submit that one of ordinary skill in the art would not be motivated to modify Middlebrook to have the lexiscape option use the results of a query since such a modification goes against the purpose of Middlebrook as a whole. Middlebrook is directed to understanding the content of a body of text as a whole. Statistical textmapping may be used as a map to reveal structure, organization and flow of information and concepts within a text. (See Col. 8, Lines 53-59). Middlebrook discloses determining which words occur most frequently within the body of text. Middlebrook teaches ranking the occurrence of all nouns appearing

within a body of text to reveal information about the body of text based on frequency and location of terms to find terms that are essential in understanding the body of text. Accordingly, Middlebrook teaches examining the entire text body to determine those most frequently occurring nouns providing a map or profile of the body of text. The nouns most frequently occurring within the body of text have nothing to do with matches resulting from a user entered query. To modify the lexiscape feature of Middlebrook to use matches resulting from a query appears to frustrate the purpose and intent of Middlebrook which is to provide an understanding or mapping of the entire body of text based on terms appearing most frequently in that body of text.

For reasons similar to those set forth regarding Claim 1, Applicants' Claim 36 is also neither disclosed nor suggested by the references. In particular, the references neither disclose nor suggest ***a method of fulfilling an information need based on documents and an index stored on a computer-readable medium comprising the steps of: receiving a query containing an unspecified portion; identifying one or more documents in the index that contain a match for at least a portion of the query; locating a plurality of strings which are matches for the unspecified portion in the query within the identified one or more documents; and ranking each of said plurality strings which are matches resulting from the query in accordance with a frequency of said each string within one or more documents,*** as set forth in amended Claim 36.

For reasons similar to those set forth regarding Claim 1, Applicants' Claim 37 is also neither disclosed nor suggested by the references. In particular, the references neither disclose nor suggest ***a method of fulfilling an information need based on documents and an index stored on a computer-readable medium comprising the steps of: storing an index identifying***

documents containing terms; receiving a query containing an unspecified portion; identifying one or more documents in the index that contain a match for at least a portion of the query; locating one or more strings which are matches for the unspecified portion in the query within the identified one or more documents; and ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more documents, as set forth in amended Claim 37.

For reasons similar to those set forth regarding Claim 1, Applicants' Claim 38 is also neither disclosed nor suggested by the references. In particular, the references neither disclose nor suggest, ***a method of fulfilling an information need comprising the steps of: receiving a query containing an unspecified portion, the unspecified portion including an unspecified term; -identifying a string which is a match for the unspecified portion in the query within a body of information stored on a computer-readable medium; and ranking said string which is a match resulting from the query in accordance with a frequency of said each string within a body of information,*** as set forth in amended Claim 38.

For reasons similar to those set forth regarding Claim 1, Applicants' Claim 43 is also neither disclosed nor suggested by the references. In particular, the references neither disclose nor suggest ***a method of fulfilling an information need comprising the steps of: receiving a query containing an unspecified portion, the unspecified portion including an unspecified term; -identifying a plurality of strings which are matches for the unspecified portion of the query within a body of information stored on a computer-readable medium; and ranking each of said plurality of strings which are matches resulting from the query in accordance with a frequency of said each string within a body of information,*** as set forth in amended Claim 43.

For reasons similar to those set forth regarding Claim 1, Applicants' Claim 132 is also neither disclosed nor suggested by the references. In particular, the references neither disclose nor suggest ***an apparatus for fulfilling an information need based on documents and an index stored on a computer-readable medium comprising: memory means that stores computer-executable process steps; and a processor that executes the process steps so as (i) to receive a query containing an unspecified portion, (ii) to identify one or more documents in the index that contain a match for at least a portion of the query, (iii) to locate one or more strings which are matches for the unspecified portion of the query within the identified one or more documents, and (iv) to rank each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more documents,*** as set forth in amended Claim 132.

For reasons similar to those set forth regarding Claim 1, Applicants' Claim 133 is also neither disclosed nor suggested by the references. In particular, the references neither disclose nor suggest ***an apparatus for fulfilling an information need comprising: memory means that stores computer-executable process steps; and a processor that executes the process steps so as to (i) receive a query containing an unspecified portion, the unspecified portion including an unspecified term,(ii) identify a string which is a match for the unspecified portion of the query within a body of information stored on a computer-readable medium, and (iii) rank said string which is a match resulting from the query in accordance with a frequency of said string within a body of information,*** as set forth in amended Claim 133.

For reasons similar to those set forth regarding Claim 1, Applicants' Claim 134 is also neither disclosed nor suggested by the references. In particular, the references neither disclose nor suggest ***an apparatus for fulfilling an information need comprising: memory means that stores computer-executable process steps; and a processor that executes the process steps so as to(i) receive a query containing an unspecified portion, the unspecified portion including an unspecified term, (ii) identify a plurality of strings which are matches for the unspecified portion of the query within a body of information stored on a computer-readable medium, and (iii)rank each of said plurality of strings which are matches resulting from the query in accordance with a frequency of said each string within a body of information,*** as set forth in amended Claim 134.

For reasons similar to those set forth regarding Claim 1, Applicants' Claim 140 is also neither disclosed nor suggested by the references. In particular, the references neither disclose nor suggest ***computer-executable process steps stored on a computer-readable medium, the computer-executable process steps to fulfill an information need based on documents and an index also stored on a computer-readable medium, the computer-executable process steps comprising: code to receive a query containing an unspecified portion; code to identify one or more documents in the index that contain a match for at least a portion of the query; code to locate one or more strings which are matches for the unspecified portion of the query within the identified one or more documents; and code to rank each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more documents,*** as set forth in amended Claim 140.

For reasons similar to those set forth regarding Claim 1, Applicants' Claim 141 is also neither disclosed nor suggested by the references. In particular, the references neither disclose nor suggest ***computer-executable process steps stored on a computer-readable medium, the computer-executable process steps to fulfill an information need, the computer-executable process steps comprising: code to receive a query containing an unspecified portion, the unspecified portion including an unspecified term; code to identify a string which is a match for the unspecified portion of the query within a body of information stored on a computer-readable medium; and code to rank said string which is a match resulting from the query in accordance with a frequency of said string within a body of information,*** as set forth in amended Claim 141.

For reasons similar to those set forth regarding Claim 1, Applicants' Claim 142 is also neither disclosed nor suggested by the references. In particular, the references neither disclose nor suggest ***computer-executable process steps stored on a computer-readable medium, the computer-executable process steps to fulfill an information need, the computer-executable process steps comprising: code to receive a query containing an unspecified portion, the unspecified portion including an unspecified term; code to identify a plurality of strings which are matches for the unspecified portion of the query within a body of information stored on a computer-readable medium; and code to rank each of said plurality of strings which are matches resulting from the query in accordance with a frequency of said each string within a body of information,*** as set forth in amended Claim 142.

In view of the foregoing, Applicants respectfully request that the rejection be reconsidered and withdrawn.

The rejection of Claims 51-58, under 35 U.S.C. 103(a) as being unpatentable over Nanjo in view of Middlebrook is hereby traversed and reconsideration thereof is respectfully requested. Applicants respectfully submit that Claims 51-58, as amended herein, are patentable over the references, taken separately or in combination.

Claim 51, as amended herein, recites a method of fulfilling an information need comprising the steps of: receiving a query containing an unspecified portion, the unspecified portion including a designated unspecified term; identifying a plurality of strings which are matches for the unspecified portion of the query within a body of information stored on a computer-readable medium; and ranking each of said plurality of strings which are matches resulting from the query in accordance with a frequency of said each string within a body of information. Claims 52-58 depend from Claim 51.

The references of Nanjo and Middlebrook are summarized above.

For reasons similar to those regarding amended Claim 1 as set forth above, Applicants' Claim 51, as amended herein, is neither disclosed nor suggested by the references, taken separately or in combination, in that the references neither disclose nor suggest ***a method of fulfilling an information need comprising the steps of: receiving a query containing an unspecified portion, the unspecified portion including a designated unspecified term; identifying a plurality of strings which are matches for the unspecified portion of the query within a body of information stored on a computer-readable medium; and ranking each of said plurality of strings which are matches resulting from the query in accordance with a***

frequency of said each string within a body of information, as set forth in Applicants' Claim 51.

In view of the foregoing, Applicants respectfully request that the rejection be reconsidered and withdrawn.

The rejection of Claims 59-121, 135-137 and 143-144 under 35 U.S.C. 103(a) as being unpatentable over Wical (U.S. Patent No. 5,953,718, hereinafter referred to as "Wical") and in view of Middlebrook is hereby traversed and reconsideration thereof is respectfully requested. Applicants respectfully submits that Claims 59-121, 135-137 and 143-144, as amended herein, are patentable over the references, taken separately or in combination.

Claim 59, as amended herein, recites a method of fulfilling an information need based on documents and an index stored on a computer-readable medium comprising the steps of: storing contexts for terms, wherein a context occurs in a document; storing information identifying a document in which a context occurs; receiving a query containing an unspecified portion; identifying one or more strings which are matches for the unspecified portion of the query within the contexts; and ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts. Claims 60-81 depend from Claim 59.

Claim 82, as amended herein, recites a method of fulfilling an information need based on documents stored on a computer-readable medium comprising the steps of: storing an index identifying documents containing terms; storing contexts for terms, wherein a context occurs in a

document; storing information identifying a document in which a context occurs; receiving a query containing an unspecified portion; identifying one or more strings which are matches for the unspecified portion of the query within the contexts; and ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts.

Claim 83, as amended herein, recites a method of fulfilling an information need based on documents stored on a computer-readable medium comprising the steps of: storing an index identifying documents containing terms; storing contexts for terms, wherein a context occurs in a document; storing information identifying a document in which a context occurs; receiving a query containing an unspecified portion; identifying a plurality of strings which are matches for the unspecified portion of the query within the contexts; and ranking each of said plurality strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts.

Claim 84, as amended herein, recites a method of fulfilling an information need based on documents and an index stored on a computer-readable medium comprising the steps of: storing contexts for terms, wherein the context occurs in a document; storing information identifying a document in which a context occurs; receiving a query containing an unspecified portion; identifying a plurality of strings which are matches for the unspecified portion of the query within the contexts; and ranking each of said plurality of strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts.

Claim 85, as amended herein, recites a method of fulfilling an information need comprising the steps of: storing contexts in which terms occur; receiving a query containing an unspecified portion; identifying one or more strings which are matches for the unspecified portion of the query within the contexts; and ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts. Claims 86-102 depend from Claim 85.

Claim 103, as amended herein, recites a method of fulfilling an information need comprising the steps of: storing contexts in which terms occur; receiving a query containing an unspecified portion; identifying one or more strings which are matches for the unspecified portion of the query within the contexts; and ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts.

Claim 104, as amended herein, recites a method of fulfilling an information need comprising the steps of: storing contexts in which terms occur; receiving a query, wherein the query comprises a term; locating, within the stored contexts, information related to the term, thereby identifying information to fulfill the need; and ranking said information resulting from the query in accordance with a frequency of said information within one or more contexts. Claims 105-121 depend from Claim 104.

Claim 135, as amended herein, recites an apparatus for fulfilling an information need comprising: memory means that stores computer-executable process steps; and a processor that executes the process steps so as to(i) store contexts for terms, wherein a context occurs in a

document, (ii) store information identifying a document in which a context occurs, (iii) receive a query containing an unspecified portion, (iv) identify one or more strings which are matches for the unspecified portion of the query within the contexts, and (v) ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts.

Claim 136, as amended herein, recites an apparatus for fulfilling an information need comprising: memory means that stores computer-executable process steps; and a processor that executes the process steps so as to(i) store contexts in which terms appear, (ii) receive a query containing an unspecified portion, (iii) identify one or more strings which are matches for the unspecified portion of the query within the contexts, and (iv)ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts.

Claim 137, as amended herein, recites an apparatus for fulfilling an information need comprising: memory means that stores computer-executable process steps; and a processor that executes the process steps so as to(i) store contexts in which terms occur, (ii) receive a query, wherein the query comprises a term, (iii) locate, within the stored contexts, information related to the term, thereby identifying information to fulfill the need, and (iv) ranking said information which results from the query in accordance with a frequency of said information within one or more contexts.

Claim 143, as amended herein, recites computer-executable process steps stored on a computer-readable medium, the computer-executable process steps to fulfill an information need,

the computer-executable process steps comprising: code to store contexts for terms, wherein a context occurs in a document, code to store information identifying a document in which a context occurs, code to receive a query containing an unspecified portion; code to identify one or more strings which are matches for the unspecified portion of the query within the contexts; and code to rank each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts.

Claim 144, as amended herein, recites computer-executable process steps stored on a computer-readable medium, the computer-executable process steps to fulfill an information need, the computer-executable process steps comprising: code to store contexts in which terms appear, code to receive a query containing an unspecified portion; code to identify one or more strings which are matches for the unspecified portion of the query within the contexts; and code to rank each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts.

Claim 145, as amended herein, recites computer-executable process steps stored on a computer-readable medium, the computer-executable process steps to fulfill an information need, the computer-executable process steps comprising: code to store contexts in which terms occur; code to receive a query, wherein the query comprises a term; code to locate, within the stored contexts, information related to the term, thereby identifying information to fulfill the need; and code to rank said information resulting from said query in accordance with a frequency of said information within one or more contexts.

Middlebrook is summarized above.

Wical discloses a research mode in a search and retrieval system that generates a research document inferring an answer to a query from multiple documents. (See Abstract; Col. 2, Lines 11-13). Wical discloses identifying documents that collectively answer a search query by identifying a common denominator among the search query and themes in the documents. (Col. 3, Lines 31-34). Wical discloses a content processing system that analyzes the thematic, contextual, and stylistic aspects of the documents and generates a document theme vector identifying themes for each individual document. (Col. 4, Lines 54-63). Wical discloses relevance ranking documents with respect to a query and determining scores measuring the relevance of documents and themes to the input query (Col. 7, Lines 50-Col. 8, Line 30; Figure 2).

Applicants' Claim 59 is neither disclosed nor suggested by the references, taken separately or in combination, in that the references neither disclose nor suggest ***a method of fulfilling an information need based on documents and an index stored on a computer-readable medium comprising the steps of: storing contexts for terms, wherein a context occurs in a document; storing information identifying a document in which a context occurs; receiving a query containing an unspecified portion; identifying one or more strings which are matches for the unspecified portion of the query within the contexts; and ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts,*** as set forth in Claim 59. Wical discloses relevance ranking of documents rather than ***ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts,*** as set forth in Claim 59. For reasons similar to those set

forth above regarding amended Claim 1, Middlebrook neither discloses nor suggests ***ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts,*** as set forth in Claim 59. Accordingly, the references do not disclose or suggest at least the feature of ***ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts,*** as set forth in Claim 59.

For reasons similar to those set forth regarding Claim 59, Applicants' amended Claim 82 is also neither disclosed nor suggested by the references, taken separately or in combination. In particular, the references neither disclose nor suggest ***a method of fulfilling an information need based on documents stored on a computer-readable medium comprising the steps of: storing an index identifying documents containing terms; storing contexts for terms, wherein a context occurs in a document; storing information identifying a document in which a context occurs; receiving a query containing an unspecified portion; identifying one or more strings which are matches for the unspecified portion of the query within the contexts; and ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more context,*** as set forth in Claim 82.

For reasons similar to those set forth regarding Claim 59, Applicants' amended Claim 83 is also neither disclosed nor suggested by the references, taken separately or in combination. In particular, the references neither disclose nor suggest ***a method of fulfilling an information need based on documents stored on a computer-readable medium comprising the steps of: storing an index identifying documents containing terms; storing contexts for terms, wherein a context occurs in a document; storing information identifying a document in which a context occurs; receiving a query containing an unspecified portion; identifying a plurality of strings***

which are matches for the unspecified portion of the query within the contexts; and ranking each of said plurality strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts, as set forth in Claim 83.

For reasons similar to those set forth regarding Claim 59, Applicants' amended Claim 84 is also neither disclosed nor suggested by the references, taken separately or in combination. In particular, the references neither disclose nor suggest ***a method of fulfilling an information need based on documents and an index stored on a computer-readable medium comprising the steps of: storing contexts for terms, wherein the context occurs in a document; storing information identifying a document in which a context occurs; receiving a query containing an unspecified portion; identifying a plurality of strings which are matches for the unspecified portion of the query within the contexts; and ranking each of said plurality of strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts,*** as set forth in Claim 84.

For reasons similar to those set forth regarding Claim 59, Applicants' amended Claim 85 is also neither disclosed nor suggested by the references, taken separately or in combination. In particular, the references neither disclose nor suggest ***a method of fulfilling an information need comprising the steps of: storing contexts in which terms occur; receiving a query containing an unspecified portion; identifying one or more strings which are matches for the unspecified portion of the query within the contexts; and ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts,*** as set forth in Claim 85.

For reasons similar to those set forth regarding Claim 59, Applicants' amended Claim 103 is also neither disclosed nor suggested by the references, taken separately or in combination. In particular, the references neither disclose nor suggest ***a method of fulfilling an information need comprising the steps of:storing contexts in which terms occur; receiving a query containing an unspecified portion; identifying one or more strings which are matches for the unspecified portion of the query within the contexts; and ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more context,*** as set forth in Claim 103.

For reasons similar to those set forth regarding Claim 59, Applicants' amended Claim 104 is also neither disclosed nor suggested by the references, taken separately or in combination. In particular, the references neither disclose nor suggest ***a method of fulfilling an information need comprising the steps of:storing contexts in which terms occur; receiving a query, wherein the query comprises a term; locating, within the stored contexts, information related to the term, thereby identifying information to fulfill the need; and ranking said information resulting from the query in accordance with a frequency of said information within one or more contexts,*** as set forth in Claim 104.

For reasons similar to those set forth regarding Claim 59, Applicants' amended Claim 135 is also neither disclosed nor suggested by the references, taken separately or in combination. In particular, the references neither disclose nor suggest ***an apparatus for fulfilling an information need comprising :memory means that stores computer-executable process steps; and a processor that executes the process steps so as to(i) store contexts for terms, wherein a context occurs in a document, (ii) store information identifying a document in which a context***

occurs, (iii) receive a query containing an unspecified portion, (iv) identify one or more strings which are matches for the unspecified portion of the query within the contexts, and (v)ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts, as set forth in Claim 135.

For reasons similar to those set forth regarding Claim 59, Applicants' amended Claim 136 is also neither disclosed nor suggested by the references, taken separately or in combination. In particular, the references neither disclose nor suggest ***an apparatus for fulfilling an information need comprising: memory means that stores computer-executable process steps; and a processor that executes the process steps so as to(i) store contexts in which terms appear, (ii) receive a query containing an unspecified portion, (iii) identify one or more strings which are matches for the unspecified portion of the query within the contexts, and (iv)ranking each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts,*** as set forth in Claim 136.

For reasons similar to those set forth regarding Claim 59, Applicants' amended Claim 137 is also neither disclosed nor suggested by the references, taken separately or in combination. In particular, the references neither disclose nor suggest ***an apparatus for fulfilling an information need comprising: memory means that stores computer-executable process steps; and a processor that executes the process steps so as to(i) store contexts in which terms occur, (ii) receive a query, wherein the query comprises a term, (iii) locate, within the stored contexts, information related to the term, thereby identifying information to fulfill the need, and (iv)***

ranking said information which results from the query in accordance with a frequency of said information within one or more contexts, as set forth in Claim 137.

For reasons similar to those set forth regarding Claim 59, Applicants' amended Claim 143 is also neither disclosed nor suggested by the references, taken separately or in combination. In particular, the references neither disclose nor suggest ***computer-executable process steps stored on a computer-readable medium, the computer-executable process steps to fulfill an information need, the computer-executable process steps comprising: code to store contexts for terms, wherein a context occurs in a document, code to store information identifying a document in which a context occurs, code to receive a query containing an unspecified portion; code to identify one or more strings which are matches for the unspecified portion of the query within the contexts; and code to rank each of said one or more strings which are matches resulting from the query in accordance with a frequency of said each string within one or more contexts,*** as set forth in Claim 143.

For reasons similar to those set forth regarding Claim 59, Applicants' amended Claim 144 is also neither disclosed nor suggested by the references, taken separately or in combination. In particular, the references neither disclose nor suggest ***computer-executable process steps stored on a computer-readable medium, the computer-executable process steps to fulfill an information need, the computer-executable process steps comprising: code to store contexts in which terms appear, code to receive a query containing an unspecified portion; code to identify one or more strings which are matches for the unspecified portion of the query within the contexts; and code to rank each of said one or more strings which are matches resulting***

from the query in accordance with a frequency of said each string within one or more contexts, as set forth in Claim 144.

For reasons similar to those set forth regarding Claim 59, Applicants' amended Claim 145 is also neither disclosed nor suggested by the references, taken separately or in combination. In particular, the references neither disclose nor suggest ***computer-executable process steps stored on a computer-readable medium, the computer-executable process steps to fulfill an information need, the computer-executable process steps comprising: code to store contexts in which terms occur; code to receive a query, wherein the query comprises a term; code to locate, within the stored contexts, information related to the term, thereby identifying information to fulfill the need; and code to rank said information resulting from said query in accordance with a frequency of said information within one or more contexts,*** as set forth in Claim 145.

In view of the foregoing, Applicants request that the rejection be reconsidered and withdrawn.

The rejection of Claims 148-150 under 35 U.S.C. 102(e) as being unpatentable over Middlebrook is hereby traversed and reconsideration thereof is respectfully requested. Applicants respectfully submit that Claims 148-150, as amended herein, are patentable over Middlebrook.

Middlebrook is summarized above.

Claim 148, as amended herein, recites a method executed in a computer system of fulfilling an information need comprising the steps of: receiving a query containing an unspecified portion, said unspecified portion including a predefined character sequence representing a matching restriction that defines at least one of: a syntactical criteria, a morphological criteria, and a criteria defined in accordance with a determination by a computer program; and identifying one or more matches for the query in accordance with said restriction.

Claim 149, as amended herein, recites a method of fulfilling an information need based on documents stored on a computer-readable medium comprising the steps of: receiving a query containing an unspecified portion, said unspecified portion being a partially unspecified portion defining a particular set of one or more character sequences without including a wildcard character; identifying one or more documents that contain a match for at least a portion of the query; locating one or more matches for the query within the identified one or more documents; and ranking each of said one or more matches resulting from the query in accordance with a frequency of said each match within said one or more documents.

Claim 150, as amended herein, recites a method of fulfilling an information need based on documents stored on a computer-readable medium comprising the steps of: receiving a query containing an unspecified portion, said unspecified portion defining a matching restriction without specifying one or more particular characters in said query; identifying one or more documents that contain a match for at least a portion of the query; locating one or more matches for the query within the identified one or more documents; and ranking each of said one or more matches resulting from the query in accordance with a frequency of said each match within said one or more documents.

Claim 148, as amended herein, is neither disclosed nor suggested by Middlebrook in that Middlebrook neither discloses nor suggests ***a method executed in a computer system of fulfilling an information need comprising the steps of: receiving a query containing an unspecified portion, said unspecified portion including a predefined character sequence representing a matching restriction that defines at least one of: a syntactical criteria, a morphological criteria, and a criteria defined in accordance with a determination by a computer program; and identifying one or more matches for the query in accordance with said restriction,*** as set forth in amended Claim 148. Middlebrook discloses that a search query may or may not contain a wildcard, and can contain any sequence of characters in connection with the use of the SEARCHSCAPE (S) menu option. In connection with a separate menu option, the LEXISCAPE (L) option, Middlebrook discloses that a list of all possible nouns appearing in the text may be compiled. However, Middlebrook makes no mention of a search query ***containing an unspecified portion, said unspecified portion including a predefined character sequence representing a matching restriction that defines at least one of: a syntactical criteria, a morphological criteria, and a criteria defined in accordance with a determination by a computer program; and identifying one or more matches for the query in accordance with said restriction,*** as set forth in amended Claim 148. Accordingly, Middlebrook neither discloses nor suggests at least the feature of ***receiving a query containing an unspecified portion, said unspecified portion including a predefined character sequence representing a matching restriction that defines at least one of: a syntactical criteria, a morphological criteria, and a criteria defined in accordance with a determination by a computer program; and identifying one or more matches for the query in accordance with said restriction,*** as set forth in amended Claim 148.

Claim 149, as amended herein, is neither disclosed nor suggested by Middlebrook in that Middlebrook neither discloses nor suggests ***a method of fulfilling an information need based on documents stored on a computer-readable medium comprising the steps of: receiving a query containing an unspecified portion, said unspecified portion being a partially unspecified portion defining a particular set of one or more character sequences without including a wildcard character; identifying one or more documents that contain a match for at least a portion of the query; locating one or more matches for the query within the identified one or more documents; and ranking each of said one or more matches resulting from the query in accordance with a frequency of said each match within said one or more documents,*** as set forth in amended Claim 149. For reasons similar to those set forth above regarding amended Claim 1, Middlebrook neither discloses nor suggests at least the feature of ***locating one or more matches for the query within the identified one or more documents; and ranking each of said one or more matches resulting from the query in accordance with a frequency of said each match within said one or more documents,*** as set forth in Claim 149.

For reasons similar to those set forth regarding Claim 149, Claim 150, as amended herein, is neither disclosed nor suggested by Middlebrook in that Middlebrook neither discloses nor suggests ***a method of fulfilling an information need based on documents stored on a computer-readable medium comprising the steps of: receiving a query containing an unspecified portion, said unspecified portion defining a matching restriction without specifying one or more particular characters in said query; identifying one or more documents that contain a match for at least a portion of the query; locating one or more matches for the query within the identified one or more documents; and ranking each of said***

one or more matches resulting from the query in accordance with a frequency of said each match within said one or more documents, as set forth in amended Claim 150.

In view of the foregoing, Applicants respectfully request that the rejection be reconsidered and withdrawn.

Based on the above, applicant respectfully requests that the Examiner reconsider and withdraw all outstanding rejections and objections. Favorable consideration and allowance are earnestly solicited. Should there be any questions after reviewing this paper, the Examiner is invited to contact the undersigned at 617-248-4042.

Respectfully submitted,
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